STIC Search Report
EIC 2100

STIC Database Tracking Number: 222815

TO: Christopher Biagini
Location: RND 4C59
Art Unit: 2142
Tuesday, April 24, 2007

Case Serial Number: 10/635878

From: Lucy Park
Location: EIC 2100
RND 4B31
Phone: 2-8667

lucy.park@uspto.gov

Search Notes

Dear Examiner Biagini:

Here are the results of your Fast & Focused search on case #10/635878. Please let me know if you have any questions about the search, or if you'd like me to refocus it.

Thanks,
Lucy

Lucy Park
Patent Searcher
EIC 2100
571-272-8667

222815

106

STIC EIC 2100
Search Request Form

Scientific & Technical Information Center

Today's Date: 4/24/07

What date would you like to use to limit the search?

Priority Date: 8/6/2003 Other:

Name CHRIS BIAGINI

AU 2142 Examiner # 82823

Room # 4C59 Phone 29743

Serial # 10/635878

Format for Search Results (Circle One):

PAPER DISK EMAIL

Where have you searched so far?

USP DWPI EPO JPO ACM IBM TDB

IEEE INSPEC SPI Other _____

Is this a "Fast & Focused" Search Request? (Circle One) YES NO

A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at http://ptoweb/patents/stic/stic-tc2100.htm.

What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

Is this request for a BOARD of APPEALS case? (Circle One) YES NO

Is this case a SPECIAL CASE? (Circle One) YES NO

The general area is network management, and the specific novelty is the ability to make recommendations to an administrator. The system makes predictions on the results of those recommendations, and keeps track of how successful they were (i.e., how many times they were followed, and if the predictions were accurate). Once the recommendations reach a certain threshold of successfulness, the system switches to being fully automatic. Synonyms for the threshold are "level of trust" and "level of confidence."

STIC Searcher Lucy Park Phone 28667

Date picked up 4-24-07 Date Completed 4-24-07

Search and Information Resources Administration

[File 347] **JAPIO** Dec 1976-2006/Dec(Updated 070403)

[File 350] **Derwent WPIX** 1963-2007/UD=200725

**File 350: DWPI has been enhanced to extend content and functionality of the database. For more info, visit http://www.dialog.com/dwpi/.*

;d s
Set Items Postings Description
S1 12988 62334 S (NETWORK??? OR LAN OR WAN)(3N)(MANAG??? OR ADMINISTRAT???)
S2 1221127 3581521 S AUTOMATIC? OR AUTOMATED OR AUTONOMIC? OR SELF(3N)(MANAG??? OR RUN OR RUNS OR RUNNING OR HEAL??? OR REGULAT???)
S3 599247 1979420 S ADMINISTRATOR? ? OR HUMAN? ? OR PERSON? ? OR SYSADMIN? ? OR MANAGER? ?
S4 385 1199 S S3(3N)(RECOMMEND??? OR RECOMMENDATION? ? OR SUGGEST???? OR PROPOSE? ? OR PROPOSING)
S5 3620 12850 S S3(3N)(SCORE? ? OR SCORING OR POINT? ?(3N)(COUNT??? OR TALLY OR TALLIES OR TRACK???) OR RATE? ? OR RATING OR RANK??? OR EVALUAT???)
S6 435260 1773189 S THRESHOLD? ? OR (EXCEED??? OR MATCH??? OR GREATER OR MORE)(3N)(LIMIT? ? OR LIMITATION? ? OR NUMBER? ? OR AMOUNT? ? OR VALUE? ? OR PRESET? ?)
S7 607903 1231362 S SUCCESS??? OR SUCCESSFULNESS OR SUCCEED??? OR CORRECT OR CORRECTLY OR CORRECTNESS
S8 1070 8370 S LEVEL? ?(2N)(CONFIDENCE OR TRUST)
S9 52155 185459 S S2(3N)(SWITCH??? OR TRANSFER???? OR BECOM??? OR BECAME OR TRANSITION??? OR GRADUAT??? OR PROGRESS???)
S10 0 0 S S1 AND S4 AND S5
S11 46 469 S S1 AND S4:S5
S12 3 27 S S11 AND S6
S13 23713 119495 S (NETWORK??? OR LAN OR WAN)(3N)(MANAG??? OR ADMINISTRAT??? OR MONITOR???)
S14 456 2392 S S13(5N)S2
S15 2 27 S S14 AND (ACTION? ? OR EVENT? ?)(3N)(RECOMMEND??? OR RECOMMENDATION? ? OR SUGGEST???? OR PROPOSE? ? OR PROPOSING)
S16 2 27 S S15 NOT S12
S17 9 75 S S14 AND (RECOMMEND??? OR RECOMMENDATION? ? OR SUGGEST???? OR PROPOSE? ? OR PROPOSING OR PROPOSAL? ?)
S18 7 54 S S17 NOT (S12 OR S16)
S19 7208 27139 S S2(3N)NETWORK???
S20 390 2419 S S19 AND S7:S8
S21 24 292 S S20 AND S6
S22 24 292 S S21 NOT (S12 OR S16 OR S18)
S23 21 246 S S22 NOT AD=20030806:20070424/PR
S24 21 246 IDPAT (sorted in duplicate/non-duplicate order)
S25 3 14 S S19 AND S5
S26 5 34 S S19 AND S8
S27 101 661 S S5 AND (RECOMMEND??? OR RECOMMENDATION? ? OR SUGGEST???? OR PROPOSE? ? OR PROPOSING)
S28 12 189 S S27 AND (NETWORK??? OR LAN OR WAN)
S29 12 189 S S28 NOT (S12 OR S16 OR S18 OR S24 OR S25 OR S26)
S30 10 145 S S29 NOT AD=20030806:20070424/PR
S31 16 78 S AUTONOMIC?(3N)NETWORK???
S32 9 28 S S31 NOT AD=20030806:20070424/PR
S33 609 3349 S S9(3N)NETWORK???

bibliographic patents

S34	58	531	S S33 AND S6:S8
S35	57	519	S S34 NOT (S12 OR S16 OR S18 OR S24 OR S25 OR S26 OR S30 OR S32)
S36	44	407	S S35 NOT AD=20030806:20070424/PR
S37	10	128	S S36 AND IC=G06F

16/5/1 (Item 1 from file: 350) **Links**
Derwent WPIX

0013755264 *Drawing available*
WPI Acc no: 2003-854187/200379
Related WPI Acc No: 2003-833998; 2003-854273; 2003-900094; 2004-032444; 2004-246371; 2004-268166; 2004-439955; 2004-480742; 2004-591673; 2004-593843; 2004-649875; 2004-804555; 2005-304782; 2005-724042; 2007-148976
XRPX Acc No: N2003-682138

Radio frequency band management method for e.g. cordless phone, involves generating control signals based on spectrum activity information derived from RF energy occurring in RF band

Patent Assignee: COGNIO INC (COGN-N); DIENER N R (DIEN-I); MILLER K A (MILL-I); SCHOLL T H (SCHO-I); SEED W R (SEED-I)
Inventor: DIENER N R; HAKOO A; MILLER K A; SCHOLL T H; SEED W R; SUGAR G L &

Patent Family (12 patents, 100 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2003090037	A2	20031030	WO 2003US13563	A	20030422	200379	B
US 20040023674	A1	20040205	US 2002319435	P	20020730	200411	E
			US 2002319542	P	20020911		
			US 2002246364	A	20020918		
			US 2002319714	P	20021120		
			US 2003420362	A	20030422		
			US 2003628603	A	20030728		
US 20040028003	A1	20040212	US 2002374363	P	20020422	200412	E
			US 2002374365	P	20020422		
			US 2002380890	P	20020516		
			US 2002380891	P	20020516		
			US 2002319435	P	20020730		
			US 2002319542	P	20020911		
			US 2002246363	A	20020918		
			US 2002319714	P	20021120		
			US 2003453385	P	20030310		
			US 2003320008	P	20030314		
			US 2003420515	A	20030422		
AU 2003228794	A1	20031103	AU 2003228794	A	20030422	200438	E
TW 595140	A	20040621	TW 2003109237	A	20030421	200506	E
EP 1502369	A2	20050202	EP 2003726565	A	20030422	200515	E
			WO 2003US13563	A	20030422		
JP 2005523616	W	20050804	JP 2003586714	A	20030422	200552	E
			WO 2003US13563	A	20030422		
TW 200401519	A	20040116	TW 2003109237	A	20030421	200569	E
CN 1663156	A	20050831	CN 2003814615	A	20030422	200611	E
AU 2003228794	A8	20051027	AU 2003228794	A	20030422	200624	E
IN 200401707	P2	20060728	WO 2003US13563	A	20030422	200656	E
			IN 2004KN1707	A	20041110		
US 7171161	B2	20070130	US 2002319435	P	20020730	200710	E
			US 2002319542	P	20020911		
			US 2002246364	A	20020918		
			US 2002319714	P	20021120		
			US 2003453385	P	20030310		
			US 2003320008	P	20030314		
			US 2003420362	A	20030422		

			US 2003628603	A	20030728		

Priority Applications (no., kind, date): US 2002374365 P 20020422; US 2002374363 P 20020422; US 2002380891 P 20020516; US 2002380890 P 20020516; US 2002319435 P 20020730; US 2002319542 P 20020911; US 2002246363 A 20020918; US 2002246364 A 20020918; US 2002246365 A 20020918; US 2002319714 P 20021120; US 2003453385 P 20030310; US 2003320008 P 20030314; US 2003420362 A 20030422; US 2003420515 A 20030422; US 2003628603 A 20030728

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 2003090037	A2	EN	170	41		
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW					
Regional Designated States,Original	AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW					
US 20040023674	A1	EN			Related to Provisional	US 2002319435
					Related to Provisional	US 2002319542
					C-I-P of application	US 2002246364
					Related to Provisional	US 2002319714
					C-I-P of application	US 2003420362
US 20040028003	A1	EN			Related to Provisional	US 2002374363
					Related to Provisional	US 2002374365
					Related to Provisional	US 2002380890
					Related to Provisional	US 2002380891
					Related to Provisional	US 2002319435
					Related to Provisional	US 2002319542
					C-I-P of application	US 2002246363
					Related to Provisional	US 2002319714
					Related to Provisional	US 2003453385
					Related to Provisional	US 2003320008
AU 2003228794	A1	EN			Based on OPI patent	WO 2003090037
TW 595140	A	ZH				
EP 1502369	A2	EN			PCT Application	WO 2003US13563
					Based on OPI patent	WO 2003090037
Regional Designated States,Original	AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR					
JP 2005523616	W	JA	109		PCT Application	WO 2003US13563
					Based on OPI patent	WO 2003090037
TW 200401519	A	ZH				
AU 2003228794	A8	EN			Based on OPI patent	WO 2003090037
IN 200401707	P2	EN			PCT Application	WO 2003US13563
US 7171161	B2	EN			Related to Provisional	US 2002319435
					Related to Provisional	US 2002319542
					C-I-P of application	US 2002246364
					Related to Provisional	US 2002319714
					Related to Provisional	US 2003453385
					Related to Provisional	US 2003320008
					C-I-P of application	US 2003420362
					C-I-P of patent	US 6850735

Alerting Abstract WO A2

NOVELTY - An information describing a particular type of activity determined to occur in a radio frequency (RF) band, is generated based on spectrum activity information derived from RF energy occurring in the RF band. A control signal is generated based on the generated information for controlling operation of a device e.g. cordless phone (1000) in the RF band.

DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- radio frequency band managing system;
- processor readable medium storing RF band management program;
- software system that manages activity in RF band;
- software architecture for RF band managing system;
- application program interface method;
- application program interface; and
- RF device.

USE - For managing RF band used by RF device (claimed) such as cordless phone, infant monitor, microwave oven and frequency hopping communication device.

ADVANTAGE - Actions can be taken in a device or network of devices to avoid interfering with other signals and to optimize simultaneous use of the frequency band with other signals. The spectrum intelligence is used to **suggest actions** to a device user or **network administrator**, or to **automatically** invoke actions in a device to main desirable performance.

DESCRIPTION OF DRAWINGS - The figure shows a schematic view of the devices operating in an unlicensed or shared frequency band.

1000 cordless phone
1010 hopping communication device
1020 microwave oven
1050(1) wireless local area network access point
1060 infant monitor device

18/5/4 (Item 4 from file: 350) **Links**
Derwent WPIX

0013816094 *Drawing available*
WPI Acc no: 2003-525814/200350
XRPX Acc No: N2003-417253
Automatic real time remote apparatus management system over network to automatically detect malfunctioning of apparatus using management controller to detect fault and set warning
Patent Assignee: INVENTEC CORP (INVE-N)
Inventor: CHANG S; CHEN M; HSIEH Y; JANG S; SHIE Y

Patent Family (4 patents, 3 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
GB 2383713	A	20030702	GB 200211675	A	20020521	200350	B
US 20030126251	A1	20030703	US 2002153950	A	20020523	200355	E
TW 554277	A	20030921	TW 2001132699	A	20011228	200425	E
GB 2383713	B	20041117				200476	E

Priority Applications (no., kind, date): TW 2001132699 A 20011228

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
GB 2383713	A	EN	24	7	
TW 554277	A	ZH			

Alerting Abstract GB A
NOVELTY - Manager software in a management center (2) automatically receives data via a network from each apparatus periodically and the data are stored in a database system (4) with tables. By monitoring the stored data according to management rules, the management center can produce a warning signal of a malfunctioning apparatus that is sent to an administrator device (6).
USE - Automatic real time management of apparatuses on a network.
ADVANTAGE - Automatically informing of malfunctioning apparatus.
DESCRIPTION OF DRAWINGS - The drawing shows the system
2 Management center
4 Database system
6 Administrator device

24/5/4 (Item 4 from file: 350) **Links**
Derwent WPIX

0011075814 *Drawing available*
WPI Acc no: 2002-011034/200201
XRPX Acc No: N2002-009178
Self-configurable paging system for cellular telecommunications network which can dynamically adapt for the varying sizes of cells
Patent Assignee: TELEFONAKTIEBOLAGET ERICSSON L M (TELF)
Inventor: DI LALLA L

Patent Family (3 patents, 93 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2001078421	A2	20011018	WO 2001SE805	A	20010410	200201	B
AU 200148957	A	20011023	AU 200148957	A	20010410	200213	E
US 6745039	B1	20040601	US 2000546249	A	20000410	200436	E

Priority Applications (no., kind, date): US 2000546249 A 20000410

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes	
WO 2001078421	A2	EN	17	4		
National Designated States,Original	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
Regional Designated States,Original	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
AU 200148957	A	EN			Based on OPI patent	WO 2001078421

Alerting Abstract WO A2
NOVELTY - Pages mobile stations that last registered in a particular cell (22) by automatically adjusting the size of an initial paging area on a per-cell basis.
DESCRIPTION - Several sets of cells surrounding the particular cell are identified as Paging Depths (PDs) and are stored in a lookup table (27) in a serving Mobile Switching Center (MSC) (24). The PDs contain varying numbers of cells, and a first PD is used for the particular cell's initial paging area. Paging attempts are then performed for mobile stations that last registered in the particular cell, statistics are compiled regarding the paging efficiency. If these indicate that the **success** rate was below a **threshold**; the PD of the cell is increased so that a **greater number** of cells are used as the initial paging area.
USE - In a cellular telecommunications network.
ADVANTAGE - Can adapt for the varying sizes of cells and the varying degrees of mobility of subscribers in different areas.
DESCRIPTION OF DRAWINGS - The drawing shows a schematic diagram of the paging system.
22 Particular cell
24 Serving Mobile Switching Center
27 Lookup table

32/5/8 (Item 4 from file: 350) **Links**
Derwent WPIX

0009191824 *Drawing available*
WPI Acc no: 1999-116173/199910
XRPX Acc No: N1999-085762
Autonomous component arrangement method in fuzzy logic neural network - involves identifying learning fault and performing autonomous amendment and deletion of fuzzy rule autonomously
Patent Assignee: FURUHASHI T (FURU-I); UCHIKAWA Y (UCHI-I); YAMAHA HATSUDOKI KK (YMHA); YAMAHA MOTOR CO LTD (YMHA)
Inventor: FUJIME Y; FURUHASHI T; UCHIKAWA Y; YAMAGUCHI M

Patent Family (2 patents, 2 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
JP 10340258	A	19981222	JP 199897472	A	19980409	199910	B
US 6330553	B1	20011211	US 199858325	A	19980409	200204	E

Priority Applications (no., kind, date): JP 199791115 A 19970409

Patent Details

Patent Number	Kind	Lan	Pgs	Draw	Filing Notes
JP 10340258	A	JA	32	25	

Alerting Abstract JP A
NOVELTY - The parameter to be identified or adjusted in fuzzy reasoning is matched with the joint load of neural network after calculating the reasoning value in neural networks. Based on the learning fault, the amendment and deletion of fuzzy rule is done autonomously and optimum number of controlled object of fuzzy rules are obtained.
DETAILED DESCRIPTION - The variation tendency and the coupling coefficient error which sets the amendment of fuzzy rule is taken as a learning fault of fuzzy rule.
USE - For fuzzy logic neural network e.g. engine controller.
ADVANTAGE - The fuzzy rule is produced autonomously even if the controlled object is non-linear. Local errors are eliminated. DESCRIPTION OF DRAWING(S) - The diagram shows an engine controller.

[File 348] **EUROPEAN PATENTS** 1978-2007/ 200715

**File 348: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.*

[File 349] **PCT FULLTEXT** 1979-2007/UB=20070419UT=20070312

**File 349: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.*

; d s
Set Items Postings Description
S1 25496 252422 S (NETWORK??? OR LAN OR WAN)(3N)(MANAG??? OR ADMINISTRAT??? OR MONITOR???)
S2 492841 2725233 S AUTOMATIC? OR AUTOMATED OR AUTONOMIC? OR AUTONOMOUS?? OR SELF(3N)(MANAG??? OR RUN OR RUNS OR RUNNING OR HEAL??? OR REGULAT???)
S3 676566 7273766 S ADMINISTRATOR? ? OR HUMAN? ? OR PERSON? ? OR SYSADMIN? ? OR MANAGER? ?
S4 9146 23261 S S3(3N)(RECOMMEND??? OR RECOMMENDATION? ? OR SUGGEST???? OR PROPOSE? ? OR PROPOSING)
S5 10981 43575 S S3(3N)(SCORE? ? OR SCORING OR POINT? ?(3N)(COUNT??? OR TALLY OR TALLIES OR TRACK???) OR RATE? ? OR RATING OR RANK??? OR EVALUAT???)
S6 476828 4232887 S THRESHOLD? ? OR (EXCEED???.OR MATCH??? OR GREATER OR MORE)(3N)(LIMIT? ? OR LIMITATION? ? OR NUMBER? ? OR AMOUNT? ? OR VALUE? ? OR PRESET? ?)
S7 606214 2283062 S SUCCESS??? OR SUCCESSFULNESS OR SUCCEED??? OR CORRECT OR CORRECTLY OR CORRECTNESS
S8 7130 60182 S LEVEL? ?(2N)(CONFIDENCE OR TRUST)
S9 30554 140980 S S2(3N)(SWITCH??? OR TRANSFER???? OR BECOM??? OR BECAME OR TRANSITION??? OR GRADUAT??? OR PROGRESS???)
S10 148 1039 S S1(50N)S4:S5
S11 1 10 S S1(50N)S4(50N)S5
S12 14 96 S S10(50N)S6:S8
S13 11 79 S S12 NOT AD=20030806:20070424/PR
S14 11 79 S S13 NOT S11
S15 5745 21616 S (ACTION? ? OR EVENT? ?)(3N)(RECOMMEND??? OR RECOMMENDATION? ? OR SUGGEST???? OR PROPOSE? ? OR PROPOSING)
S16 86 960 S S15(100N)S2(3N)NETWORK???
S17 20 327 S S16(100N)S6:S8
S18 86 1208 S S16(100N)(RECOMMEND??? OR RECOMMENDATION? ? OR SUGGEST???? OR PROPOSE? ? OR PROPOSING)
S19 24 402 S S18(100N)(SCORE? ? OR SCORING OR POINT? ?(3N)(COUNT??? OR TALLY OR TALLIES OR TRACK???) OR RATE? ? OR RATING OR RANK??? OR EVALUAT???)
S20 37 681 S S17 OR S19
S21 37 681 S S20 NOT (S11 OR S14)
S22 29 562 S S21 NOT AD=20030806:20070424/PR

fulltext patents

22/3K/12 (Item 6 from file: 349) Links
PCT FULLTEXT

01010857

FORMALIZING, DIFFUSING, AND ENFORCING POLICY ADVISORIES AND MONITORING POLICY COMPLIANCE IN THE MANAGEMENT OF NETWORKS

FORMALISATION, DIFFUSION ET APPLICATION DES AVIS EN MATIERE DE POLITIQUE ET SURVEILLANCE DU RESPECT DES POLITIQUES DANS LA GESTION DE RESEAUX

Patent Applicant/Patent Assignee:

- **BIGFIX INC**; 5915 Hollis Street, Emeryville, CA 94608
  US; US(Residence); US(Nationality)
  (For all designated states except: US)
- **HINDAWI David Salim**; 179 Forest Lane, Berkeley, CA 94708
  US; US(Residence); US(Nationality)
  (Designated only for: US)
- **DONOHO David Leigh**; 2830 Buena Vista Way, Berkeley, CA 94708
  US; US(Residence); US(Nationality)
  (Designated only for: US)
- **LIPPINCOTT Lisa Ellen**; 2117 Haste Street #310, Berkeley, CA 94704
  US; US(Residence); US(Nationality)
  (Designated only for: US)
- **HINDAWI Orion Yosef**; 179 Forest Lane, Berkeley, CA 94708
  US; US(Residence); US(Nationality)
  (Designated only for: US)
- **LOER Peter Benjamin**; 5915 Hollis Street, Emeryville, CA 94608
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  (Designated only for: US)
- **LINCROFT Peter James**; 1937 Capistrano Avenue, Berkeley, CA 94707
  US; US(Residence); US(Nationality)
  (Designated only for: US)

Patent Applicant/Inventor:

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  179 Forest Lane, Berkeley, CA 94708; US; US(Residence); US(Nationality); (Designated only for: US)
- **DONOHO David Leigh**
  2830 Buena Vista Way, Berkeley, CA 94708; US; US(Residence); US(Nationality); (Designated only for: US)
- **LIPPINCOTT Lisa Ellen**
  2117 Haste Street #310, Berkeley, CA 94704; US; US(Residence); US(Nationality); (Designated only for: US)
- **HINDAWI Orion Yosef**
  179 Forest Lane, Berkeley, CA 94708; US; US(Residence); US(Nationality); (Designated only for: US)
- **LOER Peter Benjamin**
  5915 Hollis Street, Emeryville, CA 94608; US; US(Residence); US(Nationality); (Designated only for: US)
- **LINCROFT Peter James**
  1937 Capistrano Avenue, Berkeley, CA 94707; US; US(Residence); US(Nationality); (Designated only for: US)

Legal Representative:

• **GLENN Michael(et al)(agent)**
Glenn Patent Group, Ste. L., 3475 Edison Way, Menlo Park, CA 94025; US;

	Country	Number	Kind	Date
Patent	WO	200340944	A1	20030515
Application	WO	2002US36644		20021112
Priorities	US	2001338427		20011109
	US	2002358996		20020221

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

[EP] AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES;
FI; FR; GB; GR; IE; IT; LU; MC; NL; PT;
SE; SK; TR;

[OA] BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW;
ML; MR; NE; SN; TD; TG;

[AP] GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ;
UG; ZM; ZW;

[EA] AM; AZ; BY; KG; KZ; MD; RU; TJ; TM;

Publication Language: English
Filing Language: English
Fulltext word count: 9465

Detailed Description:

...advice
typically comprises three parts: (1) a relevance clause written in relevance language which is **evaluated** by the advice reader to determine the relevance
of the advice; (2) a message body... ...to what condition is relevant, why the
advice consumer is concerned, and what action is **recommended**; and (3) an
action button for providing the advice consumer with the ability to invoke an **automatic** execution of a **recommended action** .

Whereas in the consumer setting it is acceptable for the computer user to be in... ...What is desired is a technique that provides centralized advice management in a large-scale **network** of computers.

What is further desired is that such technique provides a management
interface that can display relevant advisories of all computers in the **network** and deploy **suggested actions** to all relevant computers.

What is still further desired is that such management interface allows... ...advice provider sites, monitor status of deployed actions and monitor status of computers in the **network**.

What is still further desired is that such technique can **automatically** apply the
required management tasks to fix problems on susceptible machines before
they occur.

4
SUMMARY OF THE INVENTION
A system and method for centralized advice management of large-scale
networks is provided, wherein a number of ...server. A system administrator may view the relevant messages through a

management interface and deploy **suggested actions** to distributed clients
where the actions are executed to apply the solutions of the advisories...which the distributed client
comprises various components performing functions such as gathering
advisories, authenticating advisories, **evaluating** relevance of advisories,

22/3K/25 (Item 19 from file: 349) **Links**
PCT FULLTEXT

00758788
SERVICE LEVEL MANAGEMENT
GESTION DE NIVEAU DE SERVICE

Patent Applicant/Patent Assignee:

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  (Designated only for: US)

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	Country	Number	Kind	Date
Patent	WO	200072183	A2-A3	20001130
Application	WO	2000US14175		20000523
Priorities	US	99135492		19990524

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

[EP] AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE;

[OA] BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML; MR; NE; SN; TD; TG;

[AP] GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZW;

[EA] AM; AZ; BY; KG; KZ; MD; RU; TJ; TM;

Publication Language: English
Filing Language: English
Fulltext word count: 33247

Detailed Description:

...with respect to the flowchart in Figs. 19 In step 160, events in the enterprise **network** are detected. For each aspect of **network** operation, one or more events are mapped to one or more alarnis, step 16 1... ...are sent or output to the alarm bucket, step 162. The alarms are correlated and **evaluated** to determine the **network** operation status, step 163.

Optionally, the **network** operation status may be reported to a **network** administrator, step 164.

The report mechanism may include one or more of. e-mall, paging, and an **automated** phone call. In step 165, corrective actions that are necessary for operating the **network** at a desired level of operation, are identified. In step 166, the corrective actions may be implemented, or the **proposed** corrective **actions** reported to the **network** administrator. Depending upon the criticality or nature of the **network**, it may not be advisable to allow an agent to make changes to the **network**, without some human supervision. In other cases, **automatic** controls or responses may be allowed.

Each of the five monitoring/mapping agents operate generally ... ...the flowchart as shown in Fig. 20. Events are detected for a specific aspect of **network** - 49 operation, step 167. The detected events, step 168, are mapped to one or more...

22/3K/28 (Item 22 from file: 349) Links
PCT FULLTEXT

00548511

SELF-ENGINEERING TELECOMMUNICATIONS NETWORK INCLUDING AN OPERATION AND MAINTENANCE CONTROL POINT

RESEAU DE TELECOMMUNICATIONS A GESTION AUTOMATIQUE COMPRENANT UN POINT DE COMMANDE D'EXPLOITATION ET DE MAINTENANCE

Patent Applicant/Patent Assignee:

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  ; ;

	Country	Number	Kind	Date
Patent	WO	200011884	A1	20000302
Application	WO	99SE1346		19990806
Priorities	US	98138719		19980824

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

Publication Language: English
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Fulltext word count: 6640

English Abstract:

...operation and maintenance control point (OMCP) (31) operates at an intermediate level in a telecommunications **network** between the **network** elements (32) and the **network** management system (NMS) (21). The OMCP reduces the processing load on the NMS, and rather than reporting symptoms, provides the NMS with **suggested** corrective (49) **actions** to **correct** reported problems. The NMS executes the **suggested** corrective **actions** and compares the actual results (52) in the **network** with predicted results. Feedback on the results is then provided to the OMCP to improve its analysis and provide more effective corrective **actions** are **suggested** if the problem recurs. By **automatically** interfacing with the NMS, which analyzes and executes the **suggested** corrective **actions**, the OMCP creates a self-engineering telecommunications **network.**

Detailed Description:

...have an operation and maintenance control point which operates at an intermediate level in the **network** between the N-Es and the NMS. Such a device would reduce the processing load on the NMS and rather than reporting symptoms, would provide the NMS with **suggested** corrective **actions** to **correct** reported problems. By **automatically** interfacing with the NMS, which analyzes and executes the **suggested** corrective **actions**, the operation and maintenance control point would create a self-engineering telecommunications **network**.

SUMMARY OF THE INVENTION

In one aspect, the present invention is an operation and maintenance control point (OMCP) in a telecommunications **network** having a plurality of **network** elements that report to the OMCP and a **network** management system (NMS) to which the OMCP reports. The OMCP comprises a performance monitoring function that monitors performance of the **network** elements and determines quality of service (QoS) in the **network**, a trouble sniffer that receives performance and QoS data from the performance monitoring function and... ...function that monitors performance of the NEs and

determines quality of service (QoS) in the **network**, a trouble sniffer that receives performance and QoS data from the performance monitoring function and ... ...the suggested corrective actions, means for determining the actual results of executing the suggested corrective **actions**, and means for providing feedback to the action proposal agent regarding the actual results. The action proposal agent then utilizes the feedback to provide better **suggested**

corrective **actions**.

In another aspect, the present invention is a method of implementing a selfengineering telecommunications network. The method begins by **automatically** collecting information about the network's performance, detecting problems with the ,network's performance utilizing the collected information, and analyzing possible causes of the detected problems. The method continues by **automatically** determining **suggested** corrective **actions** to correct the causes, predicting results of executing the **suggested actions**, and executing the actions. This is followed by **automatically** comparing actual results of executing the **suggested actions** with the predicted results, and learning from the comparing step so that improved corrective **actions** are **suggested** when problems recur.

In yet another aspect, the present invention is a method of performing traffic I 0 load sharing between the cells of a self-engineering cellular radio telecommunications **network**. The network includes a mobile switching center (MSC) and a plurality of radio base stations... ...affecting network performance, and automatically determining in the OMCP, suggested changes in cell sizes to **correct** the adverse traffic loading.

In still another aspect, the present invention is a method of...Although two OMCPs have been illustrated, the invention is not limited to two, and a **greater** or lesser **number** may be utilized. The OMCP may be centralized or distributed, depending on the size of the **network**. In general, rather than just sending symptoms to the NMS 2 1, the OMCP sends **suggested** corrective **actions**. In the following figures, the operation of a single OMCP is described, although it should be recognized that several such OMCPs may be operating in a **network** and interfacing with the NMS in a similar manner.

I 0 FIG. 3 is a simplified block diagram illustrating the flow of information in a self-engineering telecommunications **network** in which the OMCP 31 of the present invention has been implemented. A self-engineering **network** is a **network** which **automatically** collects information about its performance, detects problems, analyzes the possible causes of the problems, determines **suggested** corrective **actions**, predicts 1 5 the results of executing the actions, executes the actions, compares the actual results with the predicted results, and learns from the experience so that improved corrective **actions** are **suggested** the next time. The **network** includes the NMS 21, the OMCP 3 1, and a NE 32 (MSQ. The NE the **network** can be properly and efficiently managed. Raw data may come from traffic data 34 or...

Claims:

...performing trend analyses regarding performance of the NEs and quality of service (QoS) in the **network**.
5 . The self-engineering telecommunications network of claim 2 whereinthe means for predicting results... ...suggested corrective actions to correct the causes;automatically predicting results of executing the suggested actions; **automatically** executing the actions;**automatically** comparing actual results of executing the suggested actions withthe predicted results; and**automatically** learning from the comparing step so that improved corrective actions are suggested when problems recur... ...implementing a self-engineering telecommunicationsnetwork of claim 8 further comprising, before the step of **automatically** executing the actions, the steps ofautomatically determining from the predicted results, whether the **suggested**corrective **actions** will correct the problems; and**automatically** determining improved **suggested** corrective **actions** to correct the causes, upon determining that the **suggested** corrective **actions** will not correct the problems.
10 In a cellular radio telecommunications network having a plurality of
radio base stations, a method of **automatically** changing cell sizes in order to shift traffic loads and eliminate performance and quality of... ...comprising the steps ofautomatically changing hysteresis values affecting where handoffis and cellreselections occur; and **automatically** adjusting transmitter power in the radio base stations.
11 The method of **automatically** changing cell sizes of claim IO further
comprising, before the step of **automatically** changing hysteresis values, the steps ofautomatically collecting information about network perfort-nance and qualityof... ...affecting network performance; andautomatically determining in the OMCP, suggested changes in cell sizes to **correct** the adverse traffic loading.
14 The method of performing traffic load sharing of claim 13...

22/3K/29 (Item 23 from file: 349) Links
PCT FULLTEXT

00520915
AUTOMATED FRAUD MANAGEMENT IN TRANSACTION-BASED NETWORKS
LUTTE AUTOMATISEE CONTRE LA FRAUDE DANS DES RESEAUX FONDES SUR DES TRANSACTIONS

Patent Applicant/Patent Assignee:

- **LUCENT TECHNOLOGIES INC;**
  ; ;

	Country	Number	Kind	Date
Patent	WO	9952267	A1	19991014
Application	WO	99US7441		19990405
Priorities	US	9880006		19980403
	US	99283672		19990401

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

Publication Language: English
Filing Language:
Fulltext word count: 7056

Detailed Description:

...but also collects information about the particular characteristics of that fraud. As a result, the **recommended** fraud responses are tailored to the specific type of fraud that is occurring.

As an... ...to the legitimate subscriber. Moreover, a recommendation to disable call forwarding may be carried out **automatically** using provisioning features within io the **network**.

Returning to FIG. 4, the recommendation or recommendations generated in step 209 are compared, in step 210, to recommendations that were previously given for the case. If the **recommendations** generated from step 209 are not new, then the call analysis process ends for that particular call. If the **recommendations** are new, then the case is updated with the new **recommendations** in step 21 1. If any of the new **recommendations** are of the type to be carried out **automatically** as determined in step 212, then appropriate implementation actions can be taken accordingly. For example, **recommended actions** can be implemented **automatically** via provisioning function 300 (FIG. 1) in the telecommunications **network** as previously described.

In sum, the **automatic** generation of **recommendations** according to the principles of the invention is predicated on a programmable rules-based engine... ...1-8 can all be carried out on a call-by-call basis in the **network** . Consequently, the rule-based engine is an adaptive system that is used to develop a... ...of cases, decision criteria and final outcomes on a call-by-call basis in the **network**. As such, the fraud management system and method according to the principles of the invention...

[File 2] **INSPEC** 1898-2007/Apr W3

[File 6] **NTIS** 1964-2007/Apr W3

[File 8] **Ei Compendex(R)** 1884-2007/Apr W3

[File 23] **CSA Technology Research Database** 1963-2007/Apr

[File 34] **SciSearch(R) Cited Ref Sci** 1990-2007/Apr W3

[File 35] **Dissertation Abs Online** 1861-2007/Mar

[File 65] **Inside Conferences** 1993-2007/Apr 23

[File 95] **TEME-Technology & Management** 1989-2007/Apr W4

[File 99] **Wilson Appl. Sci & Tech Abs** 1983-2007/Mar

[File 111] **TGG Natl.Newspaper Index(SM)** 1979-2007/Apr 19

[File 144] **Pascal** 1973-2007/Apr W3

[File 239] **Mathsci** 1940-2007/May

NPL

[File 256] **TecInfoSource** 82-2007/Apr

[File 434] **SciSearch(R) Cited Ref Sci** 1974-1989/Dec

;d s
Set Items Postings Description
S1 58585 165798 S (NETWORK??? OR LAN OR WAN)(3N)(MANAG??? OR ADMINISTRAT??? OR MONITOR???)
S2 1699213 2924731 S AUTOMATIC? OR AUTOMATED OR AUTONOMIC? OR AUTONOMOUS?? OR SELF(3N)(MANAG??? OR RUN OR RUNS OR RUNNING OR HEAL??? OR REGULAT???)
S3 7142402 11253953 S ADMINISTRATOR? ? OR HUMAN? ? OR PERSON? ? OR SYSADMIN? ? OR MANAGER? ?
S4 44526 92070 S S3(3N)(RECOMMEND??? OR RECOMMENDATION? ? OR SUGGEST???? OR PROPOSE? ? OR PROPOSING)
S5 97015 212101 S S3(3N)(SCORE? ? OR SCORING OR POINT? ?(3N)(COUNT??? OR TALLY OR TALLIES OR TRACK???) OR RATE? ? OR RATING OR RANK??? OR EVALUAT???)
S6 954916 1858371 S THRESHOLD? ? OR (EXCEED??? OR MATCH??? OR GREATER OR MORE)(3N)(LIMIT? ? OR LIMITATION? ? OR NUMBER? ? OR AMOUNT? ? OR VALUE? ? OR PRESET? ?)
S7 1960331 2495287 S SUCCESS??? OR SUCCESSFULNESS OR SUCCEED??? OR CORRECT OR CORRECTLY OR CORRECTNESS

S8 34621 82081 S LEVEL? ?(2N)(CONFIDENCE OR TRUST)
S9 26279 66245 S S2(3N)(SWITCH??? OR TRANSFER???? OR BECOM??? OR BECAME OR TRANSITION??? OR GRADUAT??? OR PROGRESS???)
S10 1 8 S S1 AND S4 AND S5
S11 24797 65993 S S2(3N)NETWORK???
S12 61 316 S S11 AND S4:S5
S13 44 227 RD (unique items)
S14 27 138 S S13 NOT PY=2004:2007
S15 19000 52566 S S11 NOT NEURAL()NETWORK???
S16 238 1128 S S15 AND S6
S17 23 113 S S16 AND S7:S8
S18 13 67 RD (unique items)
S19 13 67 S S18 NOT (S10 OR S14)
S20 10 49 S S19 NOT PY=2004:2007
S21 578 1809 S AUTONOMIC?(3N)(NETWORK??? OR LAN OR WAN)
S22 3 14 S S21 AND S5
S23 3 12 S S21 AND S4
S24 3 12 S S23 NOT (S10 OR S14 OR S19 OR S22)
S25 67 324 S S9 AND S4:S5
S26 46 213 RD (unique items)
S27 36 169 S S26 NOT PY=2004:2007
S28 35 165 S S27 NOT (S10 OR S14 OR S19 OR S22 OR S24)
S29 34 161 S S28 NOT NEURAL()NETWORK?

20/5/1 (Item 1 from file: 2) **Links**
INSPEC

08898248 **INSPEC Abstract Number:** B2004-04-6210L-384, C2004-04-5620L-098
Title: Baselining network traffic and online faults detection
Author Hajji, H.
Author Affiliation: IBM Tokyo Res. Lab., Kanagawa, Japan
Conference Title: 2003 IEEE International Conference on Communications (Cat. No.03CH37441) **Part** vol.1 p. 301-8 vol.1
Publisher: IEEE , Piscataway, NJ, USA
Publication Date: 2003 **Country of Publication:** USA 5 vol.xlv+3634 pp.
ISBN: 0 7803 7802 4 **Material Identity Number:** XX-2002-02598
U.S. Copyright Clearance Center Code: 7803-7802/03/$17.00
Conference Title: IEEE International Conference on Communications
Conference Date: 11-15 May 2003 **Conference Location:** Anchorage, AK, USA
Medium: Also available on CD-ROM in PDF format

Language: English **Document Type:** Conference Paper (PA)
Treatment: Theoretical (T)
Abstract: This paper addresses the problem of normal operation baselining for **automatic** detection of **network** anomalies. A model of network traffic is presented in which studied variables are viewed as sampled from finite mixture model. Based on the stochastic approximation of the maximum likelihood function, we propose baselining network normal operation, using the asymptotic distribution of the difference between **successive** estimates of model parameters. The baseline random variable is shown to be stationary, with mean zero under normal operation. Anomalous events are shown to induce an abrupt jump in the mean. Detection is formulated as an online change point problem, where the task is to process the baseline random variable realizations, sequentially, and raise alarms as soon as anomalies occur. An analytical expression of false alarm rate allows us to choose the design **threshold**, automatically. Extensive experimental results on a real network showed that our monitoring agent is able to detect unusual changes in the characteristics of network traffic, adapt to diurnal traffic patterns, while maintaining a low alarm rate. Despite large fluctuations in network traffic, this work proves that tailoring traffic modeling to specific goals can be efficiently achieved. (20 Refs)
Subfile: B C
Descriptors: computer network reliability; fault diagnosis; local area networks; maximum likelihood estimation; stochastic processes; telecommunication traffic
Identifiers: network operation; network traffic; online fault detection; network anomalies; finite mixture model; stochastic approximation; maximum likelihood function; asymptotic distribution; baseline random variable; traffic pattern
Class Codes: B6210L (Computer communications); B0240Z (Other topics in statistics); C5620L (Local area networks); C1140Z (Other topics in statistics); C5670 (Network performance)

20/5/2 (Item 2 from file: 2) Links
Fulltext available through: USPTO Full Text Retrieval Options
INSPEC

08050035 **INSPEC Abstract Number:** B2001-11-6210L-060, C2001-11-5620W-033
Title: Adaptive anomaly detection in transaction-oriented networks
Author Ho, L.L.; Cavuto, D.J.; Papavassilion, S.; Zawadski, A.G.
Author Affiliation: AT&T Bell Lab., Holmdel, NJ, USA
Journal: Journal of Network and Systems Management vol.9, no.2 p. 139-59
Publisher: Plenum ,
Publication Date: June 2001 **Country of Publication:** USA
CODEN: JNSMEG **ISSN:** 1064-7570
SICI: 1064-7570(200106)9:2L.139:AADT;1-V
Material Identity Number: B346-2001-003
U.S. Copyright Clearance Center Code: 1064-7570/2001/06000139$19.50/0

Language: English **Document Type:** Journal Paper (JP)
Treatment: Applications (A); Practical (P)
Abstract: Adaptive algorithms for real-time and proactive detection of network/service anomalies, i.e., soft performance degradations, in transaction-oriented wide area networks (WANs) have been developed. These algorithms (i) adaptively sample and aggregate raw transaction records to compute service-class based traffic intensities, in which potential network anomalies are highlighted; (ii) construct dynamic and service-class based performance **thresholds** for detecting network and service anomalies; and (iii) perform service-class based and real-time network anomaly detection. These anomaly detection algorithms are implemented as a real-time software system called TRISTAN (Transaction Instantaneous Anomaly Notification), which is deployed in the AT&T Transaction Access Services (TAS) network. The TAS network is a commercially important, high volume (millions of transactions per day), multiple service classes (tens), hybrid telecom and data WAN that services transaction traffic such as credit card transactions in the US and neighboring countries. TRISTAN is demonstrated to be capable of **automatically** and adaptively detecting **network**/service anomalies and **correctly** identifying the corresponding "guilty" service classes in TAS. TRISTAN can detect network/service faults that elude detection by the traditional alarm-based network monitoring systems. (19 Refs)
Subfile: B C
Descriptors: computer network management; credit transactions; telecommunication traffic ; transaction processing; wide area networks
Identifiers: adaptive anomaly detection; transaction-oriented networks; adaptive algorithms; real-time detection; proactive detection; network/service anomalies; soft performance degradations; wide area networks; managed multiple service class WAN; transaction records; service-class based traffic intensities; service-class based performance **thresholds**; dynamic based performance **thresholds**; real-time network anomaly detection; anomaly detection algorithms; real-time software system; TRISTAN ; Transaction Instantaneous Anomaly Notification; AT&T Transaction Access Services network; multiple service classes; transaction traffic; credit card transactions; guilty service classes; network/service fault detection; alarm-based network monitoring systems; USA
Class Codes: B6210L (Computer communications); B6210C (Network management); C5620W (Other computer networks); C7120 (Financial computing)